

75. (New) The polynucleotide of claim 67 wherein the polynucleotide comprises DNA having a sequence selected from the group consisting of:
SEQUENCE ID NO:6, SEQUENCE ID NO:7, full complements of SEQUENCE ID NO:6, SEQUENCE ID NO:7 and equivalent degenerate coding sequences thereof.

76. (New) A recombinant expression system comprising:
a nucleic acid sequence that includes an open reading frame, the open reading frame operably linked to a control sequence compatible with a desired host, the nucleic acid sequence selected from the group consisting of SEQUENCE ID NO:1, SEQUENCE ID NO:2, SEQUENCE ID NO:3, SEQUENCE ID NO:4, SEQUENCE ID NO:5, SEQUENCE ID NO:6, SEQUENCE ID NO:7, full complements of SEQUENCE ID NO:1, SEQUENCE ID NO:2, SEQUENCE ID NO:3, SEQUENCE ID NO:4, SEQUENCE ID NO:5, SEQUENCE ID NO:6, SEQUENCE ID NO:7, and equivalent degenerate coding sequences thereof.

77. (New) A cell transfected with the recombinant expression system of claim 76.

78. (New) A cell transfected with a nucleic acid sequence encoding at least one epitope, wherein the nucleic acid sequence is selected from the group consisting of SEQUENCE ID NO:1, SEQUENCE ID NO:2, SEQUENCE ID NO:3, SEQUENCE ID NO:4, SEQUENCE ID NO:5, SEQUENCE ID NO:6, SEQUENCE ID NO:7, full complements of SEQUENCE ID NO:1, SEQUENCE ID NO:2, SEQUENCE ID NO:3, SEQUENCE ID NO:4, SEQUENCE ID NO:5, SEQUENCE ID NO:6, SEQUENCE ID NO:7, and equivalent degenerate coding sequences thereof.

REMARKS

Claims 1-13, 15-22, 38, 41 and 45-49 are rejected under 35 USC § 101 because the Examiner alleges that the claimed invention is not supported by a specific asserted utility or well-

established utility. The Examiner states that the specification teaches general utility for the invention, not a specific utility. These claims have been canceled.

Furthermore, Applicant respectfully disagrees. Specifically, with respect to the maintained 101 rejection outlined in the August 3rd Advisory Action, Applicant submits Exhibit A. In Exhibit A, lane 1 shows a 100 bp MW marker set. Lane 2 is a genomic DNA negative control. The figure clearly shows a 140 bp BS274-specific PCR amplification product in lanes 3 and 7. Lanes 3 and 7 illustrate strong expression of BS274 in both breast tumor tissue and breast cancer cell line T47D, respectively. In addition, a very faint band is also seen in lanes 4, 5 and 6 which are colon tumor, lung tumor and ovary tumor, respectively. These results illustrate the unregulation of BS274 in breast tumors. This supports utility of BS274 as a tumor cell detection marker. Applicant respectfully submits that the new claims are in a condition for allowance and requests that this rejection be withdrawn.

Claims 1-13, 15-22, 38, 41 and 45-49 are rejected under 35 USC § 112, first paragraph as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. These claims have been canceled. Moreover, Applicant asserts that in light of the above amendments and remarks, the new claims are in a condition for allowance and requests that this rejection be withdrawn.

The Examiner states that the specification does not provide enablement for polynucleotides having 90% identity with SEQUENCE ID NO:1, SEQUENCE ID NO:2, SEQUENCE ID NO:3, SEQUENCE ID NO:4, SEQUENCE ID NO:5, SEQUENCE ID NO:6, SEQUENCE ID NO:7, and Applicant respectfully disagrees. Several methods are established in the art and cited in the specification for envisioning the detailed structure within the context of percent identity variants. However, in an effort to expedite prosecution, these claims have been canceled and new claims 52-78 do not contain "percent identity" language. Furthermore, new claims 52-78 encompass "full complements and equivalent degenerate coding sequences thereof". The degeneracy of the genetic code is a concept that is well-known to those skilled in the art and is even discussed in section 2144.09 of the February 2000 revision of the Manual for

Patent Examining Procedure as “the fact that most amino acids are specified by more than one nucleotide sequence or codon.” Applicant respectfully submits that the new claims are in a condition for allowance and requests that this rejection be withdrawn.

The Examiner states that the term “BS274” is not an art recognized term. Applicant respectfully directs the Examiner to page 9, line 8 of the specification, which clearly defines “BS274” as a designation for a gene. Applicant respectfully reminds Examiner that an Applicant is entitled to be his or her own lexicographer, and in many instances will provide an explicit definition for certain terms used in the claims. Where an explicit definition is provided by the applicant for a term, for example at page 9, line 8 of the instant specification, that definition will control interpretation of the term as it is used in the claim. However, in an effort to expedite prosecution, claims 1-13, 15-22, 38, 41 and 45-49 have been canceled and new claims 52-78 do not include “BS274” language. Applicant respectfully submits that the new claims are in a condition for allowance and requests that this rejection be withdrawn.

Claims 1-13, 15-22, 38, 41 and 45-49 are rejected under 35 USC § 112, first paragraph as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention at the time the application was filed. The Examiner states that the specification teaches polynucleotides consisting of SEQ ID NOS:1-7 but there is not adequate description of the genus of polynucleotides that have least 90% identity with SEQ ID NOS:1-7. In light of the above amendments, which remove “percent identity” language, Applicant respectfully submits that the new claims are in a condition for allowance and requests that this rejection be withdrawn.

CONCLUSION

In view of the aforementioned amendments and remarks, Applicant respectfully submits that the above-referenced application is now in a condition for allowance and Applicant respectfully requests that the Examiner withdraw all outstanding objections and rejections and passes the application to allowance.

Respectfully submitted,
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EXHIBIT A

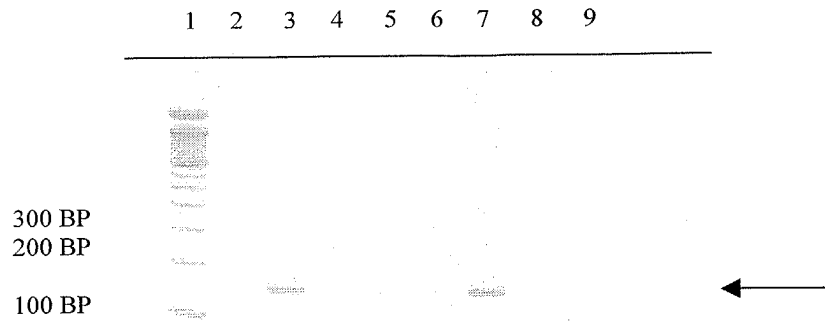


Figure 1

- Lane 1 Markers
- Lane 2 Genomic DNA
- Lane 3 Breast Tumor cDNA
- Lane 4 Colon Tumor cDNA
- Lane 5 Lung Tumor cDNA
- Lane 6 Ovary Tumor cDNA
- Lane 7 T47D cDNA
- Lane 8 PBL cDNA
- Lane 9 Water